

23 JUL 2004

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
31 July 2003 (31.07.2003)

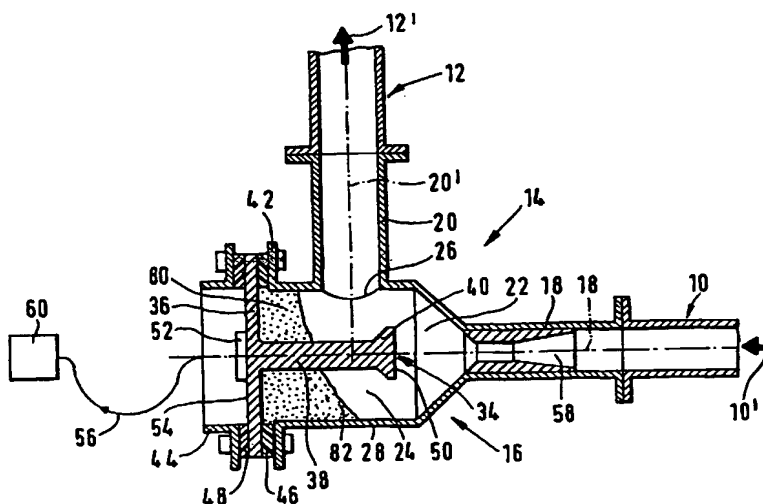
PCT

(10) International Publication Number
WO 03/062757 A1

- (51) International Patent Classification⁷: **G01F 1/66, 1/74** (74) Agents: **SCHMITT, Armand et al.**; Office Ernest T. Freylinger S.A., B.P. 48, 234, route d'Arlon, 8001 Strassen (LU).
- (21) International Application Number: **PCT/EP03/00661**
- (22) International Filing Date: **23 January 2003 (23.01.2003)** (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data:
90 883 23 January 2002 (23.01.2002) LU
- (71) Applicant (*for all designated States except US*): **PAUL WURTH S.A.** [LU/LU]; 32, rue d'Alsace, 1122 Luxembourg (LU).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): **KROEMMER, Yvan** [LU/LU]; 5, route de Luxembourg, 8360 Goettingen (LU). **BREDEN, Emile** [LU/LU]; 29, rue du Village, 6170 Godbrange (LU).
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report

[Continued on next page]

(54) Title: **METHOD AND DEVICE FOR MONITORING A MASS FLOW IN A PNEUMATIC PIPELINE**



(57) Abstract: A device for monitoring the mass flow of a particulate solids flow in a pneumatic pipeline (10, 12) comprises a measuring chamber (16) and an impact body (34, 34'). Through an inlet connection (18) the particulate solids flow is blown as a compact solid/gas jet onto the impact body (34, 34'), so as to impact thereon with substantially its whole cross-section. An acoustic transducer (52) is associated with the impact body (34, 34') for sensing structure-born acoustic waves, which are generated by said compact solid/gas jet impacting onto said impact body (34, 34'), and transforming them into an output signal. Signal processing means (60) process the output signal so as to derive therefrom a value that is representative of the mass flow rate of the particulate solids flow.

WO 03/062757 A1